

Work Order ID 71899-2

Wednesday, July 13, 2011 11:16:03 AM

Item ID: D4292-1

Revision ID:

Item Name: Fitting

Start Date: 7/14/2011

Required Date: 7/28/2011

Reference:

Approvals:

Process Plan:

QC:

Sequence ID/
Work Center ID

Operation
Description

Draw Nbr

Revision Nbr

D4292

C

100



Bandsaw

Jeaspa Bandsaw

BAND SAW

Memo

Cut Blank to 6.250"

Batch: 118201

****GRAIN DIRECTION MUST BE ALONG 4.00****

110



HAAS 1

HAAS CNC vertical machine #1

HAAS CNC VERTICAL MACHINING #1

Memo

1-Machine per folio FB002

DWG REV: C

FOLIO REV: C

2- deburr rough edges

Accept



Setup Start



Stop



Cust Item ID:

Customer:

Date: 11-07-13

Date:

Tooling:

SPC (Y/N):

Date:

Date:

Run Start



Stop



Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

0.00

0.00

0.00

0.00

SA 11/18/10

SCRAP

SCRAP

P10
+ Last Page

WORK ORDER CHANGES

W/O: 71899-1

DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D4292-1

PAR #:

Fault Category: Machining

NCR: Yes No

DQA: ☒

Date: 11/09/08

Resolution: Scrap

Disposition: Scrap

QA: N/C Closed:

Date: 11/09/08

NCR:

WORK ORDER NON-CONFORMANCE (NCR)

DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
11.08.31	1/10	RE MATIL IS CHIPPED ON INNER BOLT HOLES. Rc End mill Broken	CP 11.08.31 PS/042	RE-BORE TO CLEAN UP MATIL. GET ENG APPROVAL. -OTHERWISE - SCRAP.	11/8/31	11/09/07		
		Process Equipment/Tooling	CP 11.09.02 PS/042	SCRAP PER D.S. EMAIL	11/09/07	11/09/07	CP 11.09.02 PS/042	11/07/07

NOTE: Date & initial all entries

Work Order ID 71899

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Item ID: D4292-1

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Start Date: 7/14/2011 Start Qty: 4.00

Required Date: 7/28/2011 Req'd Qty: 4.00

Reference:

Approvals: Process Plan:

QC:

Date:

Date:

Sequence ID/
Work Center ID

120



QC

Quality Control

Operation
Description

QC2- Inspect parts off machine FAI/FAIB

Memo

121



Mill Conv

Conventional Milling Machine

Memo

DRILL & TAP FOR HELICOIL AS PER DWG

122



QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

Memo

Accept



Setup Start



Stop



Cust Item ID:

Customer:

Tooling:

Date:

Run Start



SPC (Y/N):

Date:

Stop



Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

0.00

0.00

0.00

0.00

0.00

0.00

11/8/25

11/08/31

11/08/31

Scms

6

6

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Item ID: D4292-1

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Start Date: 7/14/2011 Start Qty: 4.00

Required Date: 7/28/2011 Req'd Qty: 4.00

Reference:

Approvals: Process Plan:

QC:

Date:

Date:

Tooling:

SPC (Y/N):

Date:

Date:

Run Start

Stop

Sequence ID/
Work Center ID

130



QC

Quality Control

Operation
Description

QC8- Inspect parts - second check

Memo

Set Up/
Run Hours

0.00

0.00

140



HandFinish

Hand Finishing

Chemical Conversion Coat per QSI005 4.1

Memo

0.00

0.00

145



Powdercoat

Powder Coating

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

Memo

MASK THREADED HOLE

0.00

0.00

Accept

Cust Item ID:

Customer:

Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
---------	--------	-----------	------------	------------	---------------	-------------

Surf

Work Order ID 71899

Wednesday, July 13, 2011 11:16:03 AM

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Item ID: D4292-1

Revision ID:

Item Name: Fitting

Start Date: 7/14/2011

Start Qty: 4.00

Required Date: 7/28/2011

Req'd Qty: 4.00

Reference:

Accept

Cust Item ID:

Customer:

Approvals:

Process Plan:

Date:

QC:

Date:

Tooling:

Date:

SPC (Y/N):

Date:

Run

Start

Stop

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

150



QC

Quality Control

QC3- Inspect Part Finish

Memo

0.00

0.00

151



Small Fab

Small Fab

Memo
INSTAL HELICOIL

0.00

0.00

152



QC

Quality Control

QC5- Inspect part completeness to step on W/O

Memo

0.00

0.00

SCAP

Work Order ID 71899

Wednesday, July 13, 2011 11:16:03 AM

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Item ID: D4292-1

Revision ID:

Item Name: Fitting

Start Date: 7/14/2011 Start Qty: 4.00

Required Date: 7/28/2011 Req'd Qty: 4.00

Reference:

Accept

Setup Start

Stop

Cust Item ID:

Customer:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
---------	--------	-----------	------------	------------	---------------	-------------

180

Identify as per dwg & Stock Location: _____

0.00

Packaging

Memo

0.00

Packaging

190

QC21- Final Inspection - Work Order Release

0.00

QC

Memo

0.00

Quality Control

Scanned

Picklist Print

Wednesday, July 13, 2011 11:16:00 AM

Page 1

Work Order ID: 71899

Parent Item: D4292-1

Parent Item Name: Fitting



Start Date: 7/14/2011

Required Date: 7/28/2011

Start Qty: 4.00

Required Qty: 4.00

Comments:

IPP REV:A NEW ISSUE 10-11-14 JLM VERIFIED BY:DD
B: AS PER REV B 11-02-15 JLM VERIFIED BY:DD

IPP REV

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M7075T73B4.000x4.00 0		Purchased	No			100	f	26.8665	0.52	2.189474			



7075-T73 Bar 4.0 x 4.0



Location

Loc Qty

Loc Code

MAT

12.1255

118201

12.1255

MAT005

14.741

116153

0.75

116324

7.95

116764

6

116867

0.041

Each

84.0000

4

MS21209F1-10

Purchased

No



HELI COIL



Location

Loc Qty

Loc Code

ST305

84

116977

84

3.12 2nd 11/08/29

DART AEROSPACE LTD

Work Order: 11899

Description: Fitting

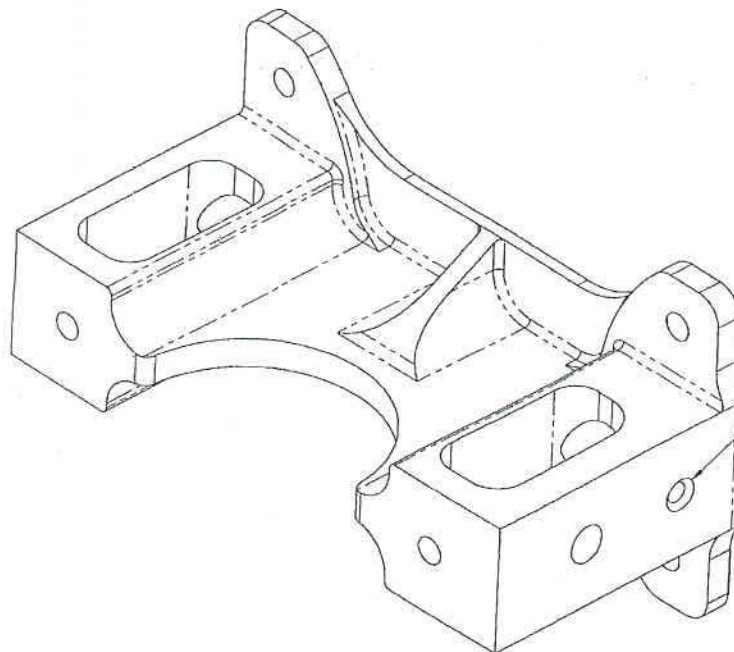
Part Number: D4292-1

Inspection Dwg: D4292 Rev: C

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FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
R0.063	+/-0.010	0.063	/		R-G	
0.250	+0.030/-0.010	0.256	/		vern JL-3	
0.125	+0.030/-0.010	0.130	/			
2.95	+/-0.030	2.950	/			
0.275	+/-0.010	0.277	/			
0.800	+/-0.010	0.799	/			
0.825	+/-0.010	0.824	/			
0.375	+/-0.010	0.375	/			
0.31	+/-0.030	0.311	/			
0.88	+/-0.030	0.880	/			
0.663	+/-0.010	0.664	/			
Ø0.381	+0.000/-0.001	0.381	/		RAZC	vern
1.125	+/-0.010	1.126	/		"	
1.063	+/-0.010	1.064	/		"	
3.44	+/-0.030	3.439	/		"	
2.450	+/-0.010	2.450	/			
1.325	+/-0.010	1.325	/			
0.300	+/-0.010	0.304	/			
1.200	+/-0.010	1.200	/			
2.84	+/-0.030	2.833	/			
0.19	+/-0.030	0.191	/		H-G	
5.86	+/-0.030	5.860	/		vern JL-3	
5.99	+/-0.030	5.990	/			
Ø0.272	+0.006/-0.001	0.273	/			
Ø0.266	+0.006/-0.001	0.268	/			
1.75	+/-0.030	1.750	/			
R0.25	+/-0.030	0.25	/		R-G	
R0.06	+/-0.030	0.060	/		R-G	
4.875	+/-0.010	4.875	/		vern JL-3	
0.493	+/-0.010	0.494	/			
C-bore Ø0.765	+/-0.010	0.764	/			
0.250	+0.030/-0.010	0.248	/		mic X-4	
0.680	+/-0.010	0.680	/		vern JL-3	
2.250	+/-0.010	2.250	/		H-G	
4.500	+/-0.010	4.500	/			
R1.275	+/-0.010	1.275	/			
R0.031	+/-0.010	0.032	/			



MS21209F1-10 HELICAL COIL, 1X
REF

GRAIN
DIRECTION

#71899

D4292-1 FITTING

RELEASED
2011-02-01

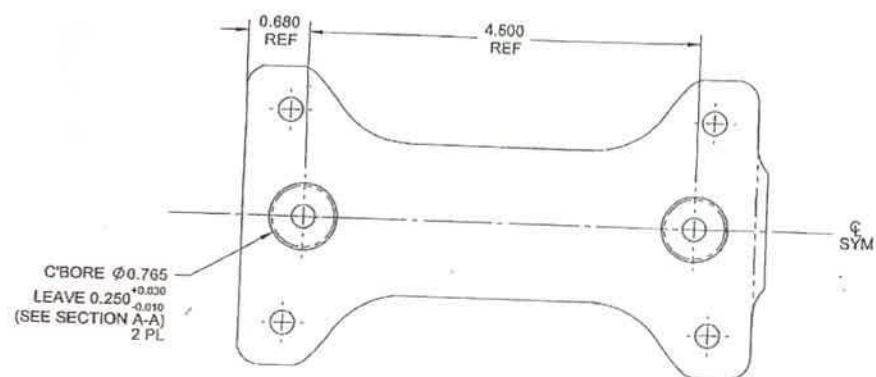
NOTES:

- 1) MATERIAL: 7075-T73/-T7351/-T73510/-T73511 BAR
PER AMS-QQ-A-200/11 OR AMS-QQ-A-225/9 (AMS 4124) OR AMS-QQ-A-250/12 (AMS 4078)
REF DART SPEC. M7075T73B
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT "WHITE" (4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: P/N "D4292-1" AND B/N PER DART QSI 044 6.1
- 7) WEIGHT: 1.02 lbs

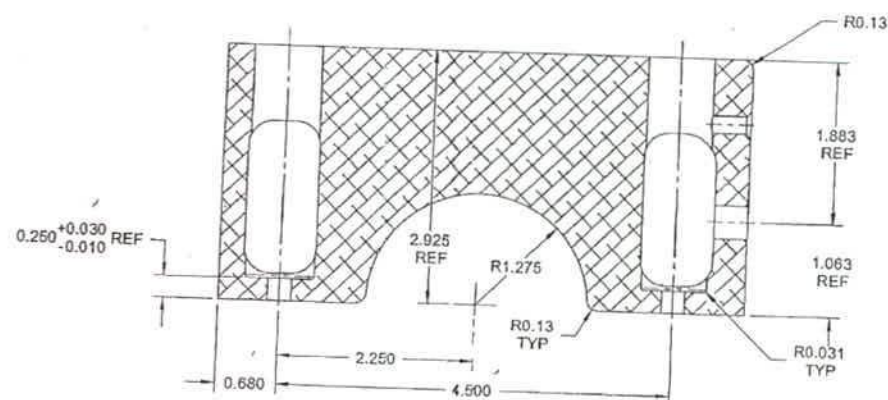
C	1.064 WAS 1.235 (C1-2), Ø0.266 WAS Ø0.323 (B3-2), ADD HELICAL COIL (D1-2)	CP	10.12.23
B	0.800 WAS 0.78 (C6-2), 0.825 WAS 0.81 (C4-2)	CP	10.11.30
A	NEW ISSUE	CP	10.11.09
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	10.12.23		

DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWING NO. D4292	REV. C
TITLE FITTING (206L/407 FWD)	SHEET 1 OF 3
	SCALE NTS

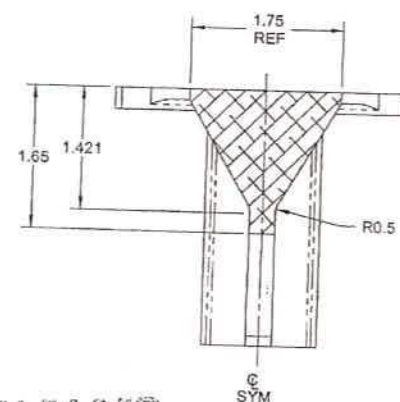
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VIEW C-C D3-2



SECTION A-A A3-2



SECTION B-B C4-2

RELEASED
2011-02-01

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO. D4292	REV. C
MFG. APPR.		TITLE	SHEET 3 OF 3
APPROVED		FITTING (206L/407 FWD)	SCALE
DE APPR.			NTS
DATE	10.12.23	COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSE ON OR FOR OR IN CONNECTION WITH ANY OTHER PROGRAM WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	

Chris Provencal

From: David Shepherd <dshepherd@dartaero.com>
Sent: Friday, September 02, 2011 1:41 AM
To: 'Chris Provencal'
Cc: 'Mike Petsche'
Subject: RE: NCR D4292-1

Chris,

I think my preference is to scrap this part rather than risk having a problem with it in service. Understand what you are saying about the shear loads, but the basket will put a large torque load through the parts and I'm not comfortable taking the risk.

Thanks,
David

From: Chris Provencal [mailto:cprovencal@dartaero.com]
Sent: September-01-11 2:02 PM
To: David Shepherd
Cc: Mike Petsche
Subject: NCR D4292-1

David,

RE: D4292-1 Support

The thickness of the flange for the two xtube stap bolts is below tolerance. The thickness is 0.226" instead of 0.250" (see attached). They had a problem with the tool and it gouged the surface, so I had them bore deeper to remove it.

For a washer to shear through the surface would take 13,000 lb ultimate ($F_{su} = 38$ ksi).

-Chris